

RECEIVED

FEB 3 - 1992

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Federal Communications Commission
Office of the Secretary

EX PARTE OR LATE FILED

In the Matter of)

Advanced Television Systems)
and Their Impact upon the)
Existing Television Broadcast)
Service)

MM Docket No. 87-268

**REPLY COMMENTS OF
RICHARD SOLOMON AND LEE MCKNIGHT**

Richard Solomon and Lee McKnight are pleased to submit these Reply Comments as private citizens in the above-captioned matter. Both participate in research at the Massachusetts Institute of Technology, Center for Technology, Policy, and Industrial Development; are members of the SMPTE Header/Descriptor Task Force; and are involved in the Committee for Open High Resolution Systems (COHRS) activities cited in the Notice of Proposed Rulemaking. These reply comments support the view that the Comments before the Commission overwhelmingly demonstrate that the qualities of interoperability, extensibility, and scalability are important to many economic and social groups, as well as the public sector, and therefore to the ultimate success of any over-the-air ATV broadcast system.

Respectfully submitted,

Lee McKnight *Richard J. Solomon*
Lee McKnight¹⁶⁵ Richard J. Solomon

January 30, 1992

No. of Copies rec'd 0+9
List A B C D E

TABLE OF CONTENTS

I.	INTRODUCTION.....	3
II.	BENEFITS OF COMPATIBLE ADVANCED TELEVISION.....	3
III.	CONCLUSION.....	5

INTRODUCTION

As researchers in the area of communication and information policy, we congratulate the Commission on its deft handling of an exceedingly complex and difficult subject, that of advanced television systems and their impact upon the existing television broadcast service. These reply comments are directed towards encouraging the Commission to stress the need for ATV compatibility with other media, as it chooses an over-the-air ATV standard.¹

BENEFITS OF COMPATIBLE ADVANCED TELEVISION

There are many reasons that the Commission should continue to consider the benefits of Advanced Television compatibility with other media as it nears a decision on this issue. The academic research community foresees broad benefits from structured, scalable video.² An open, flexible system of over-the-air television transmission will further the Federal Communications Commission's goals to promote a free marketplace of ideas, and diversity of sources of information for the American public.³ The benefits to the health of American industry, including the broadcasting and telecommunications industries, are likely to be substantial and will lead to increased economic growth.⁴ The importance of interoperability, extensibility, and scalability were also emphasized in the Comments of the Children's Television Workshop:

"by virtue of the central role that television plays in the American family, as well as the increasing attention to the use of technology (including both television and computers) in American schools, the advent of ATV creates a unique opportunity to place a mechanism for high-quality, integrated delivery of valuable educational (and other) products within reach of virtually all Americans." ⁵

¹ As discussed in paragraph 47 of the Notice of Proposed Rulemaking.

² See Comments of William F. Schreiber, MIT, at 2-6; Comments of David H. Staelin, MIT & Lincoln Laboratory, at 1-4; Comments of Andrew Lippman, MIT Media Laboratory, at 1-8; Comments of Richard Solomon, MIT, at 1-3; Comments of Kenneth L. Phillips, New York University, at 2-6; and Comments of Alan K. McAdams, Cornell University, at 1-4.

³ See Comments of Hugh Carter Donahue, at 1.

⁴ *ibid.*, at 3.

⁵ See Comments of Children's Television Workshop, at 2.

In addition to its implications for advancing the education of children, a recent National Science Foundation study⁶ concluded that a compatible ATV standard could have broad applications in learning, health, governance and citizenship, and informal education and training. A second study on 21st Century Learning and Health Care in the Home reached the same conclusions, stating that

“multimedia interactive applications have enormous potential in education for enhancing motivation, individualization, cooperative learning and parental involvement. Advanced home health information services can support disease prevention and health promotion, advanced forms of home care...” and the list goes on.⁷

The National Captioning Institute notes that a digital ATV system should make the transmission of closed captions of high quality easier; we believe that interoperability and extensibility will help ensure that whatever standard is chosen can also incorporate enhanced features for such special needs as those of the deaf and hard-of-hearing community.⁸

These comments are reinforced by the economic and technological trends observed by the venture capital community⁹, by the stated needs of the program production¹⁰, telecommunications¹¹, satellite¹², and computer industries¹³, as well as by the requirements for scientific visualization by supercomputer users.¹⁴

Working Party 4 on Alternative Media and Broadcast Interface of the Planning Subcommittee of the Advisory Committee on Advanced

⁶ See Comments of Francis Dummer Fisher, at 2.

⁷ See Comments of the Institute for Alternative Futures, at 1.

⁸ See Comments of the National Captioning Institute, Inc., at 2.

⁹ See Comments of Vinod Khosla, Kleiner, Perkins Caufield & Byers, at 2.

¹⁰ See Comments of John Weaver, Liberty Television, at 3; and Gary Demos, Comments of DemoGraFX, at 3.

¹¹ See AT&T Comments, at 2-6; and See Comments of Future Images Today at 6-8.

¹² See Comments of Comsat Video Enterprises, at 2-3.

¹³ See Comments of Branko Gerovac, Digital Equipment Corporation, at 1; and See Comments of Michael N. Liebhold, Apple Computer, at 1.

¹⁴ See Comments of Daniel Brady and Matthew Arrott, National Center for Supercomputing Applications (NCSA), at 2.

Television Service (WP4) is studying these issues. The Society of Motion Picture and Television Engineers (SMPTE) Task Forces on Digital Image Architecture and Headers/Descriptors have also been considering the challenges of compatibility.¹⁵ We commend their reports to the Commission, as it mulls over the difficult choices ahead of it on this matter.

CONCLUSION

Compatibility, extensibility, and scalability will be critical to the success of ATV in the United States, and will represent a new opportunity for U.S. industries in world markets. An over-the-air standard for ATV is more likely to be useful if it is developed taking account of the needs of users and producers of high resolution systems. This synergy may reduce component costs, improve quality, and lower set prices, which will in turn encourage accelerated growth of the services and audience for ATV. The goal of compatibility with other media is not something to postpone addressing until an indefinite future date, but rather may be achieved with no delay in the FCC process, for minimal or no additional cost in a digital ATV system, and should therefore be incorporated into any standard chosen by the FCC for over-the-air ATV.

We again congratulate the Commission on its deft handling of the exceedingly complex and difficult matter of assessing advanced television systems and their impact upon the existing television broadcast service. We conclude by repeating our encouragement for the Commission to stress the need for ATV compatibility with other media, as it chooses an over-the-air ATV standard.

¹⁵ See Comments of Sherwin H. Becker, Society of Motion Picture and Television Engineers, at 1.